While there is little new in the communication, the detailed clinical examinations, large number of post-mortems made and the numerous illustrations render this contribution an important one.

JELLIFFE.

69. **ATROPHIA MUSCOLARE PROGRESSIVA SPINALE** (Progressive Spinal Muscular Atrophy). Morasca (Resoconto degli Ospedali di Genova, 1896).

The author describes a case of progressive muscular atrophy of the Aran-Duchenne type, and comes to the general conclusion that if the patient does not come to autopsy, a clinical diagnosis of this disease is alone possible; but that from a pathological point of view the findings may be syringomyelia, or an amyotrophic lateral sclerosis, or an anterior poliomyelitis, a chronic myelitis or a progressive muscular atrophy (Erb). The clinical diagnosis without anatomical confirmation is of relative value only.

VOGEL.

70. **UN CAS D'ATROPHIE MUSCULAIRE PROGRESSIVE DU TYPE DUCHENNE-ARAN.** (A Case of Progressive Muscular Atrophy of the Duchenne-Aran Type). Villers (Journ. Med. de Bruxelles, Jan. 14, 1897).

The case reported here occurred in a man 52 years of age, who five years previously suddenly became paralyzed in the right arm, which recovered in about three months. After this there set in a weakness and gradual atrophy of the muscles of the hand, of the thumb and fingers, which gradually progressed to the arm. One year after his first sudden attack of paralysis he had a peculiar attack of twitching in the left hand, and was taken to a hospital. His condition then showed marked atrophy of the upper extremities, main en griffe, fibrillary twitchings in the opponens pollicis and interossei of the left hand. The muscles of the neck and face were less involved. Sensation and reflexes intact. No reactions of degeneration.

The patient died two years after entering the hospital, having suffered from a number of epileptiform attacks, after each one of which the atrophy became more profound, although his condition had bettered by electrical and massage measures.

Autopsy showed a universal atrophy of the muscles, more profound on the right side. The spinal cord showed a decrease in the size of the anterior horns, the cells being decreased in size. Sections at the level of the anterior end of the optic thalamus showed the position of an old hemorrhage.

Microscopical examination showed general arterio-sclerosis, also involving the brain; degeneration of the muscular substance throughout; in the spinal cord absence of any fibre degenerations, marked atrophy of the ganglion cells of the anterior horns at the level of the cervical and upper dorsal regions. There were no marked changes found in the peripheral nerves, though some showed degenerative lesions.

JELLIFFE.

71. **EXISTE-T-IL UNE ATROPHIE MUSCULAIRE PROGRESSIVE ARAN-DUCHENNE** (Is there a Progressive Muscular Atrophy of the Aran-Duchenne Type?) P. Marie (Revue Neurologique, 5, 1897, p. 686.

In a short note the author discusses the type of progressive muscular atrophy of Duchenne. He states that this was described at a time when our knowledge of the nervous system was quite incomplete, and that subsequent investigations have shown that Duchenne's symptom complex includes a number of diseases, which later writers have been able to differentiate and render classic descriptions of the same.

Some of these have been amyotrophic lateral sclerosis, myopathie progressive primitive, syringomyelia and multiple neuritis.

These considerations lead the author to conclude that there remains no well-defined type to accord with Duchenne's original description, and that the disease, as such, has ceased to exist.

JELLIFFE.

72. WEITERER BEITRAG ZUR LEHRE VON DER HEREDITAEREN PROGRESSIVEN SPINALEN MUSKELATROPHIE IM KINDESALTER, NEBST BEMERKUNGEN UEBER DEN FORTSCHREITENDEN MUSKELSCHWUND IM ALLGEMEINEN (A further Contribution to the Study of the Hereditary, Progressive, Spinal, Muscular Atrophy in Childhood; with Remarks on Progressive Muscular Atrophy in General). J. Hoffmann (Deutsche Zeitschr. f. Nervenheilk., x., 1897, p. 292.

Hoffmann publishes a very important addition to his paper on the spinal form of hereditary muscular atrophy, which appeared in 1893. He reports the case of a child, who was born of sound parents, and in normal labor, and seemed to be healthy until the seventh or eighth month of life. At this time, without known cause and without the signs of an acute or chronic general affection, bilateral, flaccid paresis of the muscles of the hip, buttock and thigh was observed, which gradually extended and involved symmetrically the muscles of the back, neck, shoulder, upper limbs and legs, and caused more or less paralysis of these parts. The muscles first affected were most atrophied. The tendon reflexes were absent. Secondary changes in the joints and vertebral column were noted. Fibrillary tremor was absent. Sensation and the action of the sphincters were normal. The electrical reactions could not be obtained, though reaction of degeneration had been observed in other children of the family who had died with similar symptoms. The mental condition was normal. The facial, lingual and throat muscles were not paralyzed. Death occurred from secondary pulmonary disease when the child was about two and a half years old. The microscopical examination showed symmetrical and marked degeneration of all the peripheral motor neurons below the twelfth nerve, including the eleventh nerve; disappearance or degeneration of the cells of the anterior horns of the cord; great degeneration of the anterior spinal roots; less noticeable changes in the peripheral nerves and the intramuscular nerve branches; distinct degeneration of the crossed and direct pyramidal tracts and of a portion of the lateral columns, which was most evident in the upper thoracic and cervical regions, but not traceable above the motor decussation. Simple atrophy in all stages was noted in the muscles. The spinal affection was believed to be primary.

Hoffmann describes a third family in which this hereditary spinal form of atrophy was observed. The diagnostic features of the malady are: the heredity; the commencement in the first year of life; the *first* signs of atrophic, flaccid paralysis in the muscles of the pelvic girdle and thighs; the extension of the atrophy to the muscles of the trunk and limbs; the absence of tendon reflexes; the presence of reaction of degeneration, and the early death.

Twenty-two cases in all of this disease and four necropsies have been reported. In all four the peripheral neurons were found much degenerated and the muscles in a simple state of atrophy, and in three the anterolateral columns were affected.

At one time only the different forms of muscular atrophy, known as dystrophy, were supposed to be hereditary. Hoffmann speaks of the following four forms of hereditary muscular atrophy:

1. A form which begins in childhood in the muscles of the pelvic